

## **Nearshore Impacts Resulting from Dam Removal on the Elwha River.**

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Keywords: Elwha River, Dam Removal, Nearshore Habitats, Sediment Transport

Removal of two dams on the Elwha River of the Olympic Peninsula is currently slated to begin in early 2008. Dam removal will expose over 14 million cubic meters of mixed grain-size sediments deposited in the reservoirs behind the dams, which will be left to be naturally eroded and transported to the Strait of Juan de Fuca. Increased supply of sediment to the strait, if it occurs, may end, or perhaps reverse, the current trend of erosion along the river delta and adjacent shoreline. Further, increased sediment supply may bury or alter nearshore habitats for locally-productive kelp beds and Geoducks offshore of the river mouth. Working closely with local and state partners, U.S. Geological Survey (USGS) scientists have developed a research program to characterize and describe the current nearshore conditions and future impacts of the dam removals. This project will conduct beach and nearshore mapping, process monitoring, and numerical modeling of sediment dispersal. In March 2004, swath-sonar, seabed video and seabed grain-size sampling was conducted to produce high-resolution bathymetry and seabed maps. In September 2004, we conducted nearshore bathymetric and beach topographic mapping using RTK GPS technologies. Results of these activities will be shown along with research plans of future activities.